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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,946	09/04/2003	Scott W. Weller	END920030037US1	9007

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IBM CORPORATION
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EXAMINER

JAE, CHARLES J

ART UNIT	PAPER NUMBER
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2109

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/656,946

Applicant(s)

WELLER, SCOTT W.

Examiner

Charles J. Jae

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04 September 2003</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

This Office Action is in response to the Application filed on 9/4/2003.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 10, 16, 30, and 130. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:
On page 4, lines 8, 9 and 10, the reference character "CPU 30" appears to use an incorrect number. It appears that it should refer to --CPU 23--;

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On page 4, line 14, the term "server" should be followed by its corresponding reference character, for example, --server 14--.

Appropriate correction is required.

Claim Objections

3. Claims 1-9 and 11-19 are objected to because of the following informalities:

In claim 1, on lines 5 and 6, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

In claim 1, on line 6, the term "subsequent communications" has been previously defined, and should be changed to --the subsequent communications-- in order to make proper reference to its antecedent.

In claims 2-5, line 1, the term "A method" has been previously defined, and should be changed to --The method-- in order to make proper reference to its antecedent.

In claim 2, line 2, the phrase "a message including an uncompressed header" has been previously defined, and should be changed to --the message including an uncompressed header-- in order to make proper reference to its antecedent.

In claim 3, line 2, the phrase "a message including a compressed header" has been previously defined, and should be changed to --the message including a compressed header-- in order to make proper reference to its antecedent.

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In claim 6, on lines 9 and 10, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

In claims 7-9, line 1, "A computer program product" has been previously defined, and should be changed to --The computer program product-- in order to make proper reference to its antecedent.

In claim 7, line 2, the phrase "a message including an uncompressed header" has been previously defined, and should be changed to --the message including an uncompressed header-- in order to make proper reference to its antecedent.

In claim 8, line 2, the phrase "a message including a compressed header" has been previously defined, and should be changed to --the message including a compressed header-- in order to make proper reference to its antecedent.

In claims 11-12, on line 1, "A method" has been previously defined, and should be changed to --The method-- in order to make proper reference to its antecedent.

In claim 13, line 7, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

In claims 14-15, on line 1, "A method" has been previously defined, and should be changed to --The method-- in order to make proper reference to its antecedent.

In claim 15, on line 3, the term "said server" lacks proper antecedent basis. It appears that this problem would be fixed if the claim were to depend from either claim 13 or claim 14 instead of claim 12.

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In claim 15, line 3, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

In claim 16, on lines 4, 5, and 6, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

In claim 16, line 6, the term "subsequent communications" has been previously defined and should be changed to --the subsequent communications-- in order to make proper reference to its antecedent.

In claims 17-19, on line 1, "A method" has been previously defined, and should be changed to --The method-- in order to make proper reference to its antecedent.

In claim 17, line 2, the phrase "a message including an uncompressed header" has been previously defined, and should be changed to --the message including an uncompressed header-- in order to make proper reference to its antecedent.

In claim 17, line 2, the term "sufficient storage" has been previously defined, and should be changed to --the sufficient storage-- in order to make proper reference to its antecedent.

In claim 17, line 3, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

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In claim 18, line 3, the phrase "a message including a compressed header" has been previously defined, and should be changed to --the message including a compressed header-- in order to make proper reference to its antecedent.

In claim 18, line 4, the term "sufficient storage" has been previously defined, and should be changed to --the sufficient storage-- in order to make proper reference to its antecedent.

In claim 18, line 4, the term "header compression" has been previously defined, and should be changed to --the header compression-- in order to make proper reference to its antecedent.

4. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim (see claim 15). It should be kept in mind that a dependent claim may refer to any preceding independent claim.

In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Appropriate correction is required.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-5 are directed to a method for compressing message headers. While a method does fall within one of the categories of statutory subject matter, this method does not appear to have any tangible output or result that would be observed by a user outside the system. The method ostensibly describes the moving back and forth of data from client to server with no output or result, and is therefor non-statutory.

Claims 6-9 are drawn to a computer program product comprising instructions recorded on a computer-readable medium. The recitation of "computer-readable medium" causes the claims to be non-statutory because without further support from the specification, it can be interpreted as including media such as carrier waves and RF signals, which are forms of energy and do not fall into any of the four categories of patent-eligible subject matter. Also, the method implemented by the instructions does not appear to have any tangible output or result that would be observed by a user outside the system. The method ostensibly describes the moving back and forth of data from client to server with no output or result, and is therefor non-statutory.

Claims 10-12 are drawn to a method for compressing message headers. While a method does fall within one of the categories of statutory subject matter, this method does not appear to have any tangible output or result that would be observed by a user outside the system. The method ostensibly describes the moving back and forth of data from client to server with no output or result, and is therefor non-statutory.

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Claims 13-15 are drawn to a method for compressing message headers. While a method does fall within one of the categories of statutory subject matter, this method does not appear to have any tangible output or result that would be observed by a user outside the system. The method ostensibly describes the moving back and forth of data from client to server with no output or result, and is therefor non-statutory.

Claims 16-19 are drawn to a method for compressing message headers. While a method does fall within one of the categories of statutory subject matter, this method does not appear to have any tangible output or result that would be observed by a user outside the system. The method ostensibly describes the moving back and forth of data from client to server with no output or result, and is therefor non-statutory.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birdwell (US 6,032,197) in view of Chambers (US 5,426,779).

In his disclosure, Birdwell teaches the ability to receive both full-length data packets, which have uncompressed headers, and reduced-length data packets, which have compressed headers derived from associated uncompressed headers (column 2, lines 14-18), as required by claims 1, 6 and 10. Birdwell's system, when supplied with an

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uncompressed header, uses a header index value to designate an entry in the header table for storing the uncompressed header (column 6, lines 11-20), in accordance with claims 2 and 7. Birdwell's compressed header comprises a compression key block as well as the compressed header itself. The compression key block contains a compression bit which designates the packet as a compressed packet, as well as the header index which is a reference to a location in the header index table where the associated uncompressed header may be found (column 2, line 66 to column 3, line 6), as required by claims 3, 8 and 11. Using the header index, Birdwell's system reconstructs the uncompressed header from the compressed header by adding the missing fields that are stored in the header index table (column 7, lines 39-46), in accordance with claims 4, 9 and 12. Birdwell's system has the ability to create and store additional uncompressed headers in the header index table (column 7, line 62 to column 8, line 6), as required by claim 5. In accordance with claims 6-9, Birdwell also discloses the practice of placing his system on a computer-readable medium, as shown in claim 7 of his disclosure.

Birdwell differs from the claimed invention in that his system does not determine the impact of compression on performance before proceeding with the method steps.

The general concept of checking on the outcome of compression is well known in the art, however, as shown by Chambers.

In his disclosure, Chambers shows that his system determines the outcome of a compression operation. If the compression was successful, operation continues normally. However, if the compression was not successful, as in the case of

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compressing incompressible data, the operation is reversed, and the inputs are copied directly to the outputs, thereby not supporting the compression function (column 7, lines 35-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Birdwell's compression method to include the condition checking of Chambers as a way to optimize the data compression, and thereby reduce network congestion.

9. Claims 13-14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Birdwell (US 6,032,197) in view of Culbert (US 5,696,926).

In his disclosure, Birdwell teaches the ability to receive both full-length data packets, which have uncompressed headers and reduced-length data packets, which have compressed headers derived from associated uncompressed headers (column 2, lines 14-18), as required by claims 13 and 16. Birdwell's system, when supplied with an uncompressed header, uses a header index value to designate an entry in the header table for storing the uncompressed header (column 6, lines 11-20), in accordance with claims 14 and 17. Birdwell's compressed header comprises a compression key block as well as the compressed header itself. The compression key block contains a compression bit which designates the packet as a compressed packet, as well as the header index which is a reference to a location in the header index table where the associated uncompressed header may be found (column 2, line 66 to column 3, line 6). Using the header index, Birdwell's system reconstructs the uncompressed header from

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the compressed header by adding the missing fields that are stored in the header index table (column 7, lines 39-46), in accordance with claim 18. Birdwell's system has the ability to create and store additional uncompressed headers in the header index table (column 7, line 62 to column 8, line 6), as required by claim 19.

Birdwell differs from the claimed invention in that his system does not determine the availability of data storage before proceeding with the method steps.

The general concept of checking on the availability of data storage is well known in the art, however, as shown by Culbert.

Culbert discloses a method of checking on the availability of physical page space to receive decompressed output. If there is sufficient space, operation continues normally. If there is not sufficient space, however, the system takes actions to correct the problems.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Birdwell's compression method to include the resource checking of Culbert as a way in which to assure that any compression operation can be carried out correctly and properly.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Birdwell (US 6,032,197) and Chambers (US 5,426,779) as applied to claim 12 above, and further in view of Culbert (US 5,696,926).

Birdwell and Chambers meet all of the limitations of claim 15 except for determining the availability of data storage before proceeding with the method steps.

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The general concept of checking on the availability of data storage is well known in the art, however, as shown by Culbert.

Culbert discloses a method of checking on the availability of physical page space to receive decompressed output. If there is sufficient space, operation continues normally. If there is not sufficient space, however, the system takes actions to correct the problems.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Birdwell and Chambers to include the resource checking of Culbert as a way in which to assure that any compression operation can be carried out correctly and properly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles J. Jae whose telephone number is 571-270-1590. The examiner can normally be reached on Monday thru Friday, 7:30AM-5:00PM, Alt Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules can be reached on 571-270-1808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJJ
01/31/2007

FRANTZ JULES
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Frantz Jules', with a long horizontal flourish extending to the right.